

Programming 2

Tutorial 9

This week's tutorial and practical sessions are about understanding how to model a GUI application within the Model-View-Controller framework.

Tutorial/Practical Sessions

For your final assignment, you will be required to write a GUI-based application that is organised using the Model-View-Controller approach. Given the assignment specification, discuss what these three modules will comprise (in terms of packages, classes and methods).

Model

- How will the model interact with the rest of the system?
 - Which code modules need information from the model?
 - Which code modules need to pass information to the model?
 - What operations must the model support?
- Note: While discussing the view and controller sections below, consider how the model can be further organised to make things convenient in terms of sending and receiving information.

View

- How will the user interface be organised? i.e. What 'screens' of components will be implemented, and how will they be laid out?
- Identify which UI components are most appropriate for each task and describe how they will operate as part of the overall user interface.
- How will the view and model exchange information?
- How will the system decide when the view needs to be updated?

Controller

- For each function the user will perform, identify the ways in which the user will interact with the program (This will be based upon the UI components identified above).
- Determine how this interaction is to be implemented in terms of:
 - Which event listeners (and methods) are necessary?
 - How should the listeners be organised and scoped (e.g. separate class, inner class, anonymous inner class etc.)
 - Write pseudocode and/or sequence diagrams for the most important actions. These do not need to be formal but should identify the main class and method interactions.